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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/810,995	03/16/2001	Kenneth V. Buer	36956.0700/USM0007	7312

7590 03/22/2004

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EXAMINER	
CORSARO, NICK	
ART UNIT	**PAPER NUMBER**
2684	6

DATE MAILED: 03/22/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/810,995	BUER, KENNETH V.	
	Examiner	Art Unit	
	Nick Corsaro	2684	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *16 March 2001*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-12 and 15-19* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *15* is/are allowed.

6)☒ Claim(s) *1-12 and 16-19* is/are rejected.

7)☒ Claim(s) *16* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *16 March 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *5*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Specification

1. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The following title is suggested: "SYSTEM AND METHOD FOR UPLINK POWER CONTROL BY DETECTING AMPLIFIER COMPRESSION POINT USING DC CURRENT DETECTION".

Claim Objections

2. The numbering of claims is not in accordance with 37 CFR 1.126 which requires the original numbering of the claims to be preserved throughout the prosecution. When claims are canceled, the remaining claims must not be renumbered. When new claims are presented, they must be numbered consecutively beginning with the number next following the highest numbered claims previously presented (whether entered or not). The original claim set had a claim 16; therefore the newly added claims should have been numbered consecutively from 16.

Misnumbered claims 16-18 have been renumbered 17-19.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claim 16 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 16 appears to be missing a preamble declaring a method or an apparatus.

For examination purposes claim 16 will be interpreted as having the preamble " A method for signal control in a satellite ground station comprising:"

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 1-14, and 16-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Moerder et al. (6,256,483) in view of Kintis et al. (6,662,018).

Consider claim 1, Moerder discloses a satellite ground station system, said system in signal communication with a satellite (see col. 5 lines 48-53). Moerder discloses a signal control unit configured to modulate a transmission signal to said satellite in accordance with a theoretical P1 db point of said system, said P1 db point in correlation with a power sensor (see col. 2 lines 47-67, col. 3 lines 45-67, col. 4 lines 9-45, col. 4 lines 48-55, cp;/ 7 lines 41-67, col. 8 lines 1-67, and col. 9 lines 40-48). Moerder discloses an antenna unit configured to receive a communication from said satellite and to transmit said transmission signal to said satellite, and a means for two-way signal communication between said control unit and said antenna unit (see col. 5 lines 28-67, and col. 6 lines 1-60).

Moerder discloses correlating with power sensing (see col. 6 lines 51-60, col. 8 lines 47-67, col. 9 lines 1-47). Moerder, however, does not specifically disclose a dc current sensor. Kintis teaches dc current sensor (see col. 4 lines 49-67, col. 5 lines 1-20).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention of Moerder, and have dc current sensor, as taught by Kintis, thus allowing a power control system that does not result in saturation, as discussed by Kintis (col. 1 lines 40-64).

Consider claim 2, Moerder discloses a satellite ground station system of the type capable of receiving and transmitting RF signals to a satellite, a transmitted RF signal having a transmission power level as determined by a signal control unit of said system (see col. 1 lines 36-67, col. 2 lines 9-46, col. 5 lines 48-53, and col. 7 lines 40-67). Moerder discloses said signal control unit varying the power level of said transmitted RF signal in accordance with a power sensing means such that a maximum transmission power level is determined by said temperature sensing means (see col. 2 lines 47-67, col. 3 lines 45-67, col. 4 lines 9-45, col. 4 lines 48-55, col. 7 lines 41-67, col. 8 lines 1-67, and col. 9 lines 40-48).

Moerder discloses correlating with power sensing means (see col. 6 lines 51-60, col. 8 lines 47-67, col. 9 lines 1-47). Moerder, however, does not specifically disclose a dc current sensing means. Kintis teaches dc current sensing means (see col. 4 lines 49-67, col. 5 lines 1-20).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention of Moerder, and have dc current sensing means, as taught by

Kintis, thus allowing a power control system that does not result in saturation, as discussed by Kintis (col. 1 lines 40-64).

Consider claim 3, Moerder discloses an uplink power control system for a satellite communication station (see col. 5 lines 27-33, col. 7 lines 41-67, col. 8 lines 1-46). Moerder discloses transceiving RF signals with a satellite (see col. 5 lines 28-67, and col. 6 lines 1-60). Moerder discloses said power control system comprising a control unit having a modem and a power sensing mechanism, said modem providing a signal for transmission to said satellite in accordance with said power sensing mechanism (see col. 8 lines 21-46, col. 7 lines 40-67, and col. 8 lines 1-67). Moerder discloses an antenna unit having an antenna for receiving said RF signal from said satellite and transmitting an RF signal to said satellite, said transmitted RF signal in accordance with said signal for transmission received from said modem of said control unit (see col. 5 lines 27-67 and col. 6 lines 1-60). Moerder discloses a signal transfer means between said control unit and said antenna unit (see col. 6 lines 12-60).

Moerder discloses correlating with power sensing mechanism (see col. 6 lines 51-60, col. 8 lines 47-67, col. 9 lines 1-47). Moerder, however, does not specifically disclose a dc current sensing Mechanism. Kintis teaches dc current sensing mechanism (see col. 4 lines 49-67, col. 5 lines 1-20).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention of Moerder, and have dc current sensing mechanism, as taught by Kintis, thus allowing a power control system that does not result in saturation, as discussed by Kintis (col. 1 lines 40-64).

Consider claims 8 and 16, Moerder discloses a method for signal control in a satellite ground station, said station of the type for transmitting and receiving signals between a satellite (see col. 5 lines 27-53). Moerder discloses receiving, at a transceiver unit of said station, a signal for satellite transmission from a control unit of said station (see col. 5 lines 65-67, and col. 6 lines 1-60). Moerder discloses detecting, at said control unit, a power level supplied to said transceiver unit in the presence of said signal for satellite transmission (see col. 6 lines 54-60, col. 8 lines 22-46). Moerder discloses determining a desired maximum signal power level of said signal based on said detecting step (see col. 4 lines 8-25, col. 2 lines 47-67, col. 7 lines 40-67, and col. 8 lines 1-67). Moerder discloses modulating said signal in accordance with said desired maximum signal power level; and transmitting said modulated signal from said transceiver unit to said satellite (see col. 6 lines 20-60, and col. 5-67).

Moerder discloses correlating with power level (see col. 6 lines 51-60, col. 8 lines 47-67, col. 9 lines 1-47). Moerder, however, does not specifically disclose detecting a dc current supplied to the transceiver. Kintis teaches sensing a dc current supplied to the transceiver (see col. 4 lines 49-67, col. 5 lines 1-20).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention of Moerder, and detect a dc current supplied to the transceiver, as taught by Kintis, thus allowing a power control system that does not result in saturation, as discussed by Kintis (col. 1 lines 40-64).

Consider claim 17, Moerder discloses a method for determining a Pl db compression point of a power control system (see col. 2 lines 54-67, col. 4 lines 9-25, col. 4 lines 54-60, and col. 9 lines 40-48). Moerder discloses said system having a control unit in communication with

an antenna unit (see col. 5 lines 27-65, and col. 6 lines 20-60). Moerder discloses in said control unit, providing a signal to said antenna unit, said signal comprising a signal power level (see col. 6 lines 20-60, co. 7 lines 61-67, and col. 8 lines 1-21). Moerder discloses detecting a power level of said signal, analyzing a change of said power level, said change corresponding to a difference between a reference point and said detected power level (see col. 7 lines 40-65, and col. 8 lines 1-67). Moerder discloses increasing said signal power level and repeating the above steps; and determining an inflection point in said change of said power level, said inflection point corresponding to said P I db compression point (see col. 9 lines 40-67, and col. 10 lines 1-61, col. 16 lines 8-67, and col. 2 lines 47-67).

Moerder discloses sampling the power and the temperature to set a P 1db compression point, however, does not specifically disclose detecting a DC current level of the signal. Kintis teaches detecting a DC current level of the signal (see col. 4 lines 55-67, col. 5 lines 1-20). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention of Moerder, and detect a DC current level, as taught by Kintis, thus allowing a power control system that does not result in saturation, as discussed by Kintis (col. 1 lines 40-64).

Consider claims 4 and 5, the above combination discloses a dc current sensor in electrical communication with the RF power control device.

Consider claim 6, Moerder discloses determining a compression point comprises determining the change in power provided to said antenna unit (col. 4 lines 8-25, col. 2 lines 47-67, col. 7 lines 40-67, and col. 8 lines 1-67). Moerder discloses sampling the power and the temperature to set a P 1db compression point, however, does not specifically disclose detecting a

DC current level of the signal. Kintis teaches detecting a DC current level of the signal (see col. 4 lines 55-67, col. 5 lines 1-20). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention of Moerder, and detect a DC current level, as taught by Kintis, thus allowing a power control system that does not result in saturation, as discussed by Kintis (col. 1 lines 40-64).

Consider claim 7, Moerder disclose the signal transfer means comprises a cable (see col. 6 lines 1-20).

Consider claim 9, 18 and 19, Moerder discloses determining step comprises determining a Pl db compression point (see col. 4 lines 8-25, col. 8 lines 1-67, and col. 9 lines 40-48).

Consider claims 10, 11, 12, Moerder discloses determining saturation levels for the compression point (see col. 4 lines 8-25, col. 5 lines 27-67, col. 6 lines 1-67, col. 7 lines 41-67 and col. 8 lines 1-67). Moerder does not specifically disclose correlating with a dc current. Kintis teaches correlating with a dc current (see col. 4 lines 55-67). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention of Moerder, and detect a DC current level, as taught by Kintis, thus allowing a power control system that does not result in saturation, as discussed by Kintis (col. 1 lines 40-64).

Allowable Subject Matter

7. Claim 15 is allowed.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

(6,587,002), Vogt teaches sensing dc current to control power.

9. Any inquiry concerning this communication should be directed to Nick Corsaro at telephone number (703) 306-5616.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nay Maung, can be reached at (703) 308-7745. Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

Or faxed to:

(703) 872-9314 (for Technology center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth, Floor (Receptionist). Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 customer Service Office whose telephone number is (703) 306-0377.

Nick Corsaro

NICK CORSARO
PATENT EXAMINER